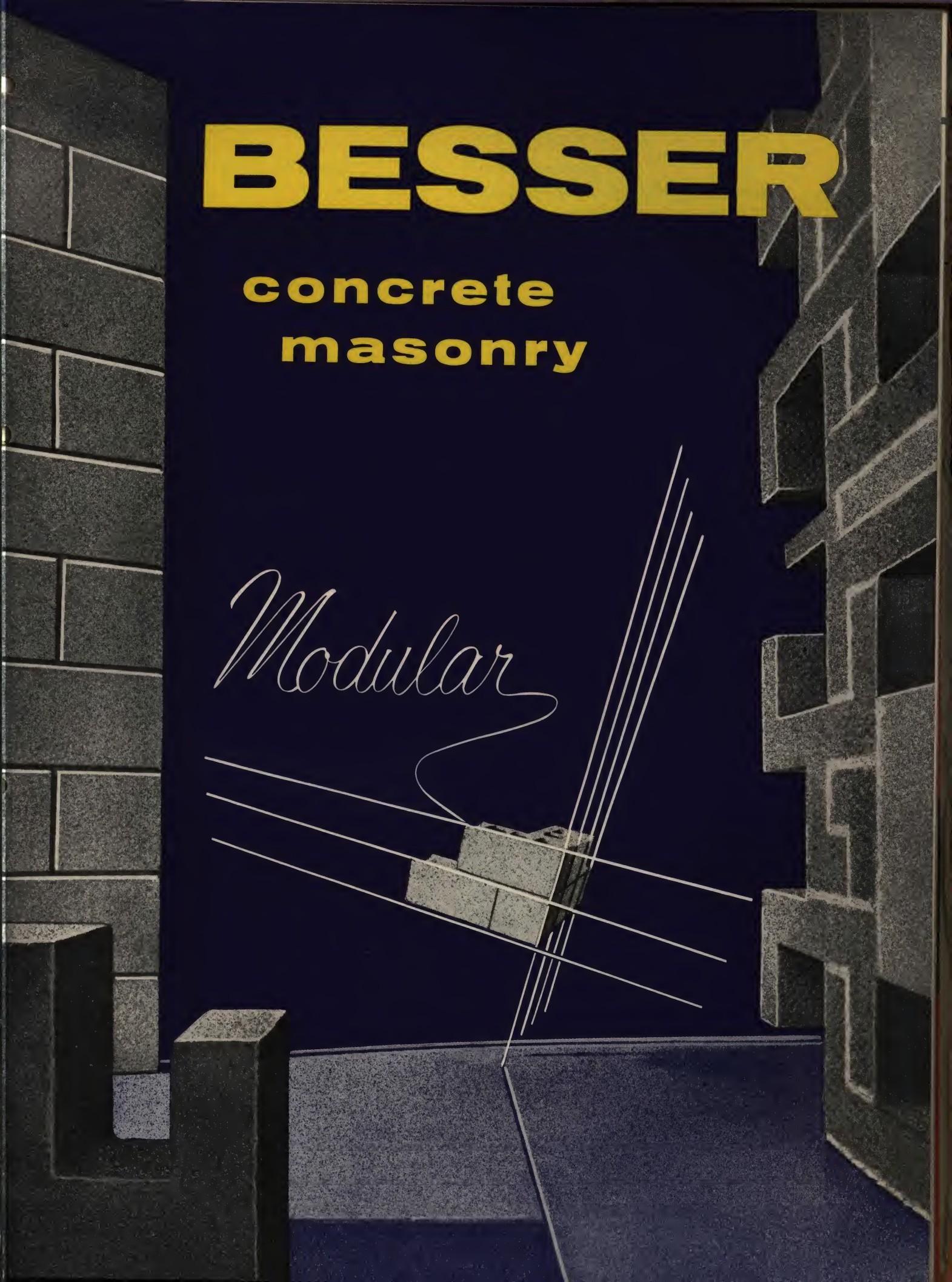


# BESSER

concrete  
masonry

*Modular*



## **purpose of this catalog . . . .**

This booklet is intended to give Architects, Engineers and Builders the facts about Vibrapac Block and their uses.

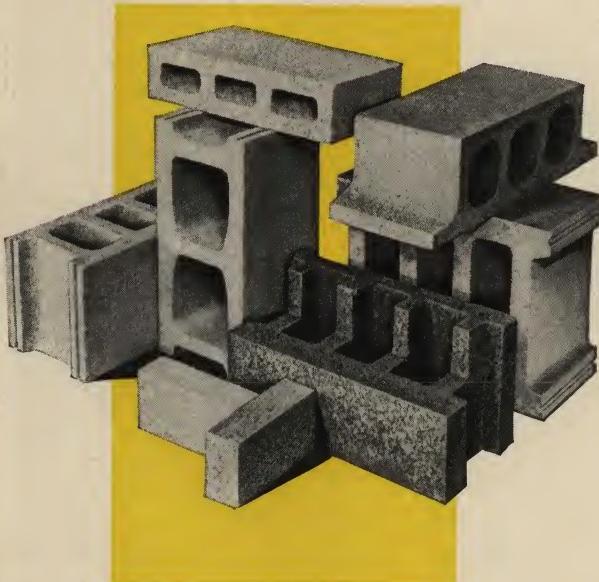
The objective is to convey to the reader as quickly and simply as possible the features and wide range of potential uses of Vibrapac Block—"The Quality Block."

The building units illustrated in this book are available in most areas at Vibrapac equipped Block Plants. Check local Vibrapac Plants for sizes and shapes available in your area. The location of the plant nearest you will be sent by contacting Besser Company, Dept. ADV., Alpena, Michigan, U.S.A.

Besser Company offers assistance to architects and builders in the proper use of concrete block, which is based upon the knowledge and know-how gained over many years of development and application.

Through this service Besser Company collaborates with users and prospective users of Vibrapac Block.

### **vibrapac block**



Properly designed Block in various sizes and shapes, in Modular Dimensions are mass produced on Besser Block Machines, and are available from Vibrapac Block Plants throughout the world. These block are used wherever good architectural design and building is carried on. Concrete Block challenges the creative skill and imagination of the designer.

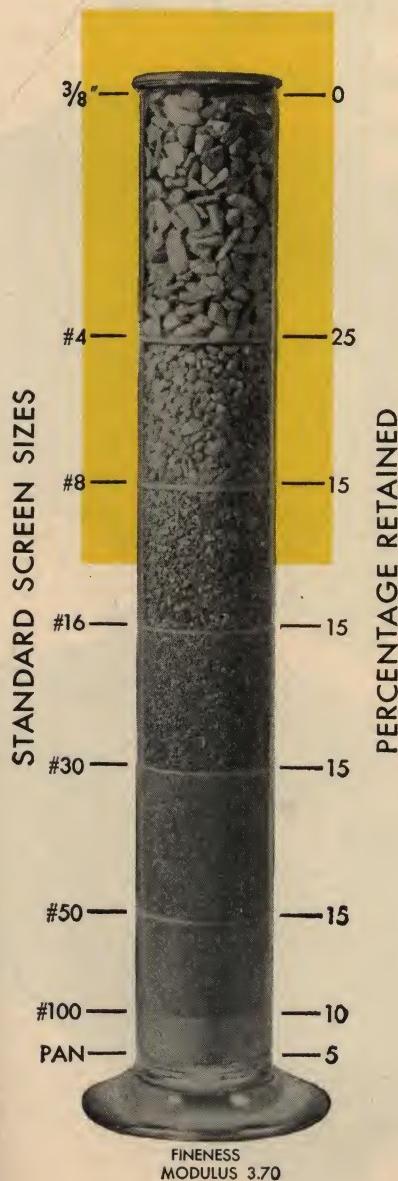
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## standards for quality block

The manufacture of hollow concrete masonry units is now a well established industry. No other building material developed in the last 50 years has had a more phenomenal growth and acceptance. Today, concrete block is a product of major importance and, in keeping with its dominant position, enables the purchaser to buy with confidence and full assurance that he is getting the best product for his purpose.

Whether purchased for exterior or interior use, each type of block should have basic characteristics directly related to its construction application.

### ideal gradation of sand and gravel



### exterior block

Exterior block should be dense and watertight and of such size and shape that it conveniently produces watertight walls. Also, it must liberally meet the minimum load and tensile strength requirements for a specific use. On this point, Vibrapac Block should actually provide a double safety factor—that is, double the minimum.

Block made from dense aggregates such as gravel-sand, limestone and slag are extensively used in structures where durability, economy of construction and maintenance are important factors.

### interior block

For interior use, on the other hand, where special characteristics are desired—especially for exposed interior walls of houses, churches, schools and public buildings—lightweight aggregates are used most advantageously. The successful processing of lightweight aggregates produced from clay or shale, found in abundance in different parts of the country, along with cinders and natural materials, open up new fields to architectural treatment. Block made from these lightweight aggregates are porous, easily handled units which have many desirable properties in addition to structural strength.

Lightweight block provide excellent insulating and sound absorption properties as well as ready adaptability to coloring and can be produced in a wide range of textures for added beauty.

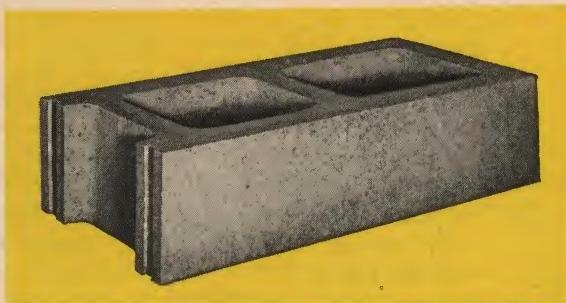
Another development to which lightweight units have adapted themselves and which is rapidly gaining in popularity, is their use as floor filler and plank assemblies.

### quality block prerequisites

- Good Clean Aggregate
- Correct Grading and Proportioning
- Maximum Amount of Clean Water
- Sufficient Amount of Cement
- Long-Time Mixing
- Concrete Properly Compacted in Mold
- Steam Curing in Moist Air for Uniformity and High Strength of Block
- Covered Storage for Thorough Drying

## block—basic building material

Today concrete block are widely used in the finest structures of every conceivable type—in residences, churches, auditoriums, multi-story skyscrapers, schools, hospitals, theaters, stores, factory buildings, and apartments.



### vibrapac quality block are:

- Made on fully automatic machines.
- Uniform in height and density.
- Accurate in modular dimensions and have sharp clean edges.
- Compacted by intense vibration under terrific pressure.
- Dense and weathertight.
- Highly fire resistant.

### advantages of vibrapac block

- A stronger block in tension at center.
- The center one-third of a block is stronger due to wedge shaped fillet, up to center web, on Two Core Block, and the smaller center core makes the center one-third stronger on Three Core Block. Produces a stronger wall.
- Wider mortar bed at center where ends of adjoining block meet above and below, makes wall stronger where needed and saves mortar.
- New design two core block also has two inch wide flanges at ends for receiving ample mortar to make a permanent head joint.
- Wide deep mortar grooves make a good key for lateral stability and weather tightness.
- Well balanced block with center hand hold for one hand handling. Hand holds on end webs for handling dense aggregate block.
- Two core block has one less web between face shells, thereby, reducing thermal conductivity by 25%.
- Concrete is correctly distributed in face shells for increased tensile and compressive strength without increasing weight.
- Wide end flange with deep mortar groove provides ample suction area for mortar—it stays "put" to the very top—until the block is shoved in place.
- Wind driven rain—cannot penetrate the wide flange with full size mortar groove.
- Wide stubby flange stands more shock—arrives on scaffold with flanges intact.
- Outside webs, close to end of block, provide larger Core space for poured concrete—placed at intervals with vertical reinforcing for earthquake and hurricane protection.
- Larger core space in two core block is easier to fill with granular insulation and spaced for electrical conduit, water pipe, etc.

Concrete Masonry has won a unique place in modern building construction. In terms of wall volume, it is used for more than two-thirds of all masonry walls built.

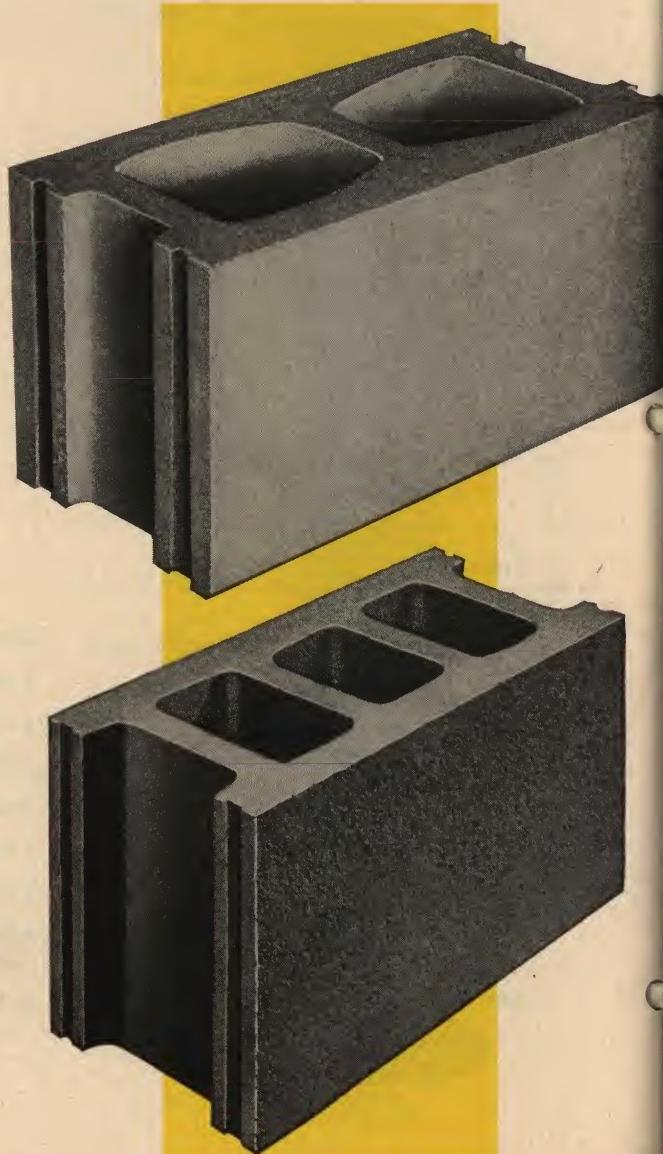
Concrete Block has long been recognized as an excellent structural material. Now, architects and builders, having become better acquainted with it, have a fuller appreciation of its wide architectural possibilities as a finish material for both exterior and interior walls.

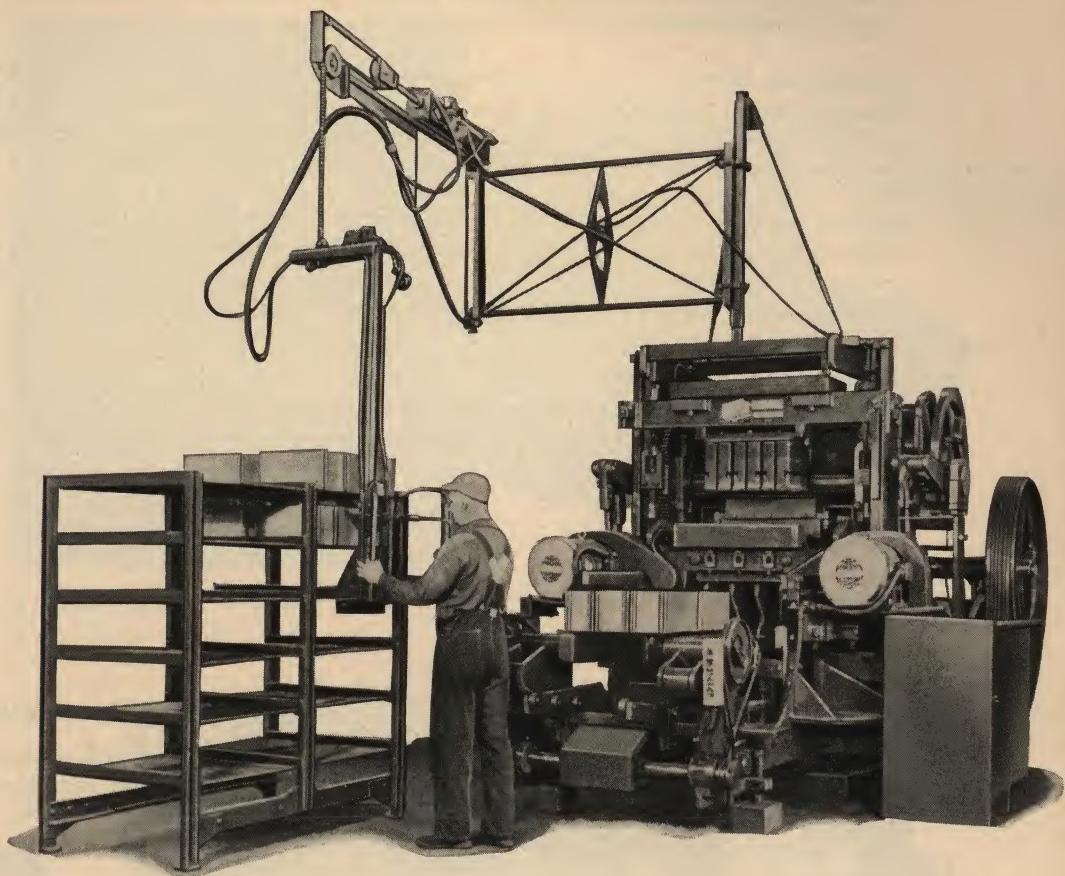
The characteristics demanded in modern-day structures—beauty, fire-safety, durability, economy, comfort, utility and good acoustics—are obtained with concrete block.

Concrete masonry walls provide year-round comfort—whether for homes, schools, churches or office buildings. Such structures stay cool in summer, warm in winter, snug and dry in any season and in any location. Concrete masonry, offering all these advantages, is being used more and more.

It is easy to lay concrete block in various distinctive patterns by using the many sizes of block available. Quality block for exterior and interior use may be painted or colored to meet styling and decorative needs.

Vibrapac Block are specified by progressive architects—used by leading contractors—produced and sold by leading concrete block plants throughout the world.



**BESSER AUTOMATIC VIBRAPAC**  
**The World's Leading Block Machine . . .**

The finest concrete block in the world is produced automatically by the VIBRAPAC . . . a machine originated and perfected by the Besser Company and now in use by most of the world's leading concrete block plants.

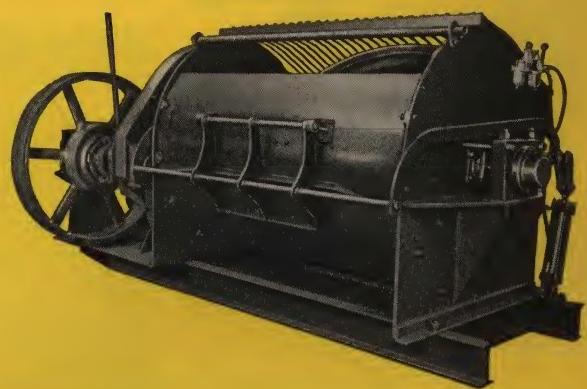
Since 1904, The Besser Company has developed and perfected concrete block machinery to the point where each machine is a modern, dynamic production line. From the

small hand models, with capacities of 150 block per day, the industry has grown to demand modern high production block machines to meet the ever increasing demand for more and greater variety of concrete masonry units.

Today, a Besser Vibrapac sets the pace for a maximum production of 8000 high quality block per day.

**BESSER BATCH MIXERS . . . are the standard for the concrete products industry . . . the heart of a mass production high quality block plant.**

Spiral Blades are an original Besser design. The blades are set so that they enter mix easily and throw it in a figure eight motion. This action gives the most thorough mixing and makes for quality block.



## SPLIT BLOCK gives you . . . color . . . texture . . . proportion

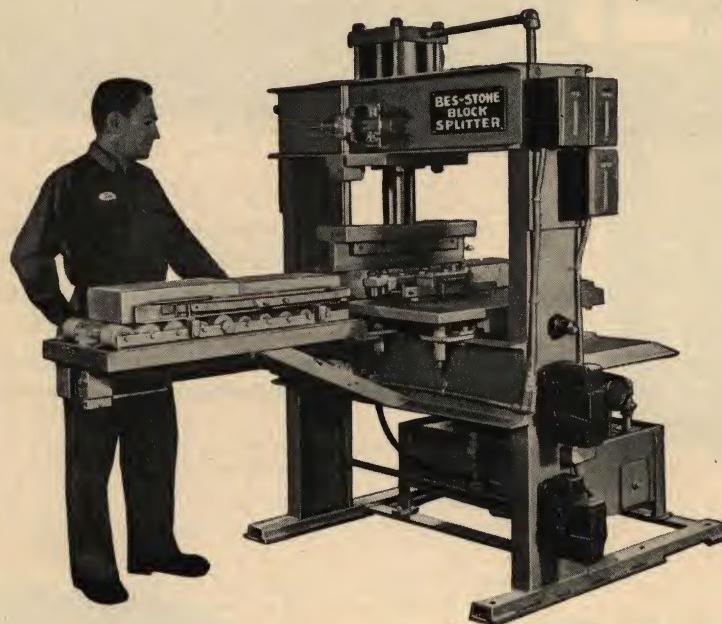
Split Block is a genuine concrete masonry product, manufactured to exacting specifications of compressive strength, denseness, plus color permanence.

Colorful hues formed by Nature thousands of years ago are blended into Split Block to give beauty in building beyond comparison . . . . The handsome rugged-texture of Split Block is accomplished by actually splitting the aggregate. Split Block colors have beautiful shadings of color which make it ideal for exteriors and offers you a chance to create a scheme with individuality.

For Any Architectural Design . . . . period or modern, residential or commercial, no matter what type of building you plan, you can now have a dramatic beauty of Split Block for both interior and exterior walls. They're designed to blend with any setting, to accentuate any architectural style. Modular design means savings from original layouts to finished construction.

Write to Besser Company, Alpena, Michigan for listing of Vibrapac plants producing Split Block under various trade names.

### manufacture



**BES-STONE  
block splitter**

BES-STONE Block Splitter with powerful Hydraulic pressure accurately splits the highest test concrete to produce split block.

Besser Company maintains permanent exhibits of concrete masonry in the Architects Samples Building, 101 Park Avenue, New York City and the new National Housing Center, 1625 L Street, N. W., Washington, D. C.

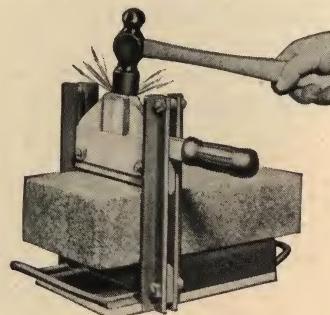
### pony block trimmer

Pony block trimmer is a portable tool for occasional cutting of split block on the job.



### pony jr. trimmer

Pony Jr. trimmer is a portable tool for trimming block, brick and stone.



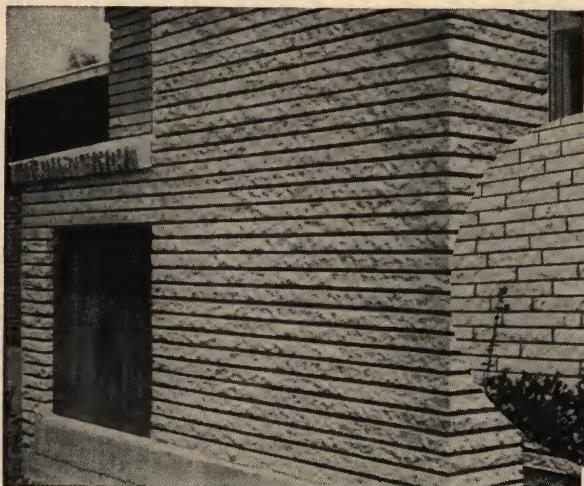
## patterns with SPLIT BLOCK



Coursed Ashlar pattern wall and 4" x 16" split block planter.



Beautiful wall of 2" high split block, horizontal joints raked out and tooled.



Pleasing 3" high colored split block wall with raked and tooled joints.



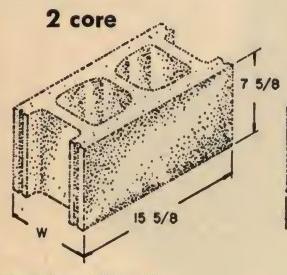
Random ashlar, multi-colored wall with rough, irregular surface is entirely pleasing.

## modular standard block shapes

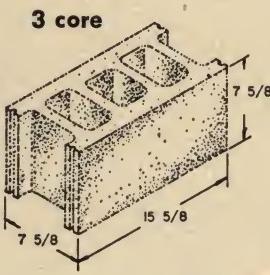
Designed and engineered to meet the demands of Architects, Engineers and Builders for units adapted to modern contemporary and conventional structures.

### wall block

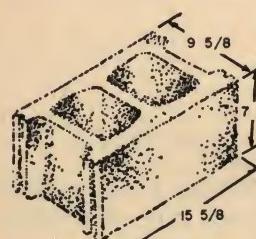
"W" Indicates Modular Wall Widths  
 $7\frac{5}{8}''$  —  $9\frac{5}{8}''$  —  $11\frac{5}{8}''$



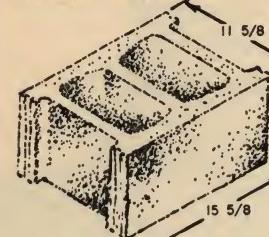
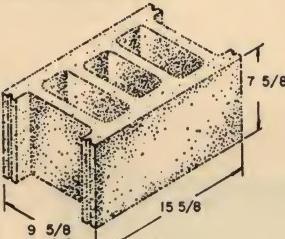
stretchers 8" wall



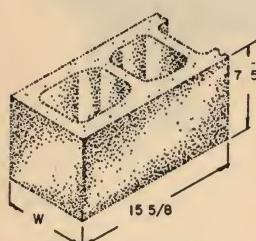
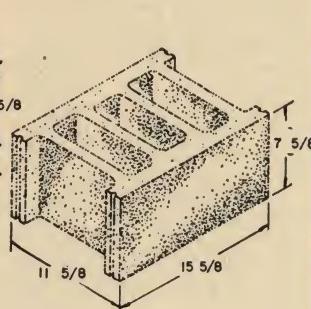
3 core



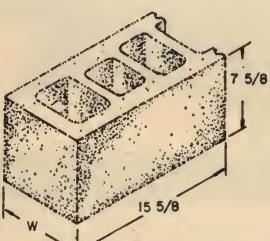
stretchers 10" wall



stretchers 12" wall

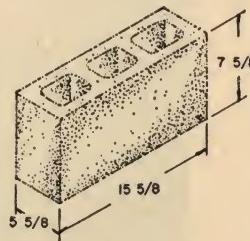
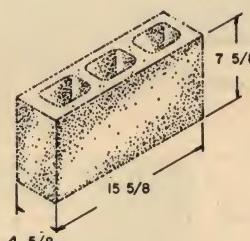
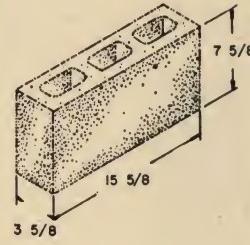
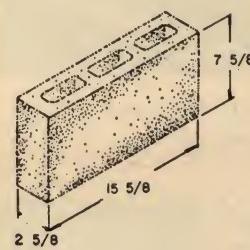
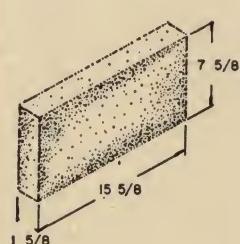


single corner

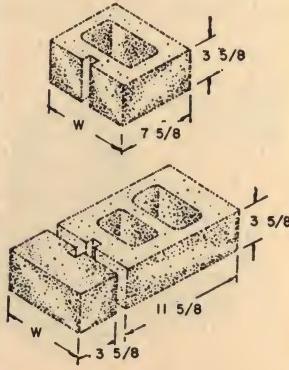
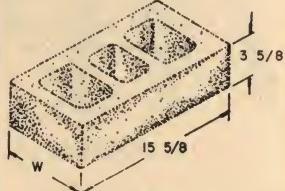
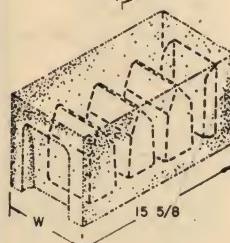
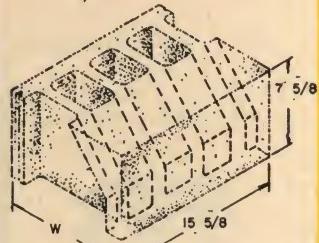
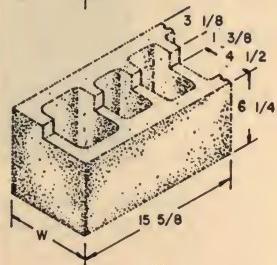
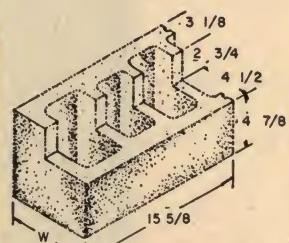


double corner

### slab or partition

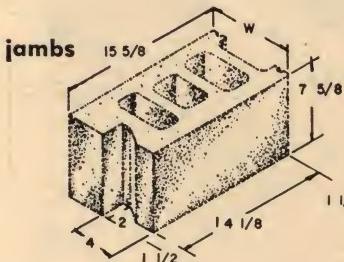


### auxiliary shapes

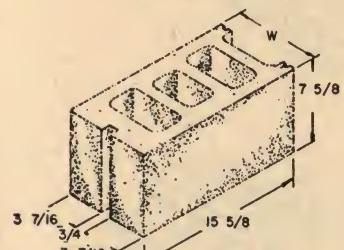
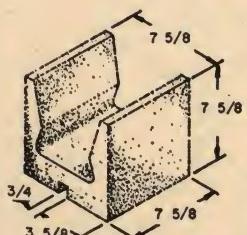
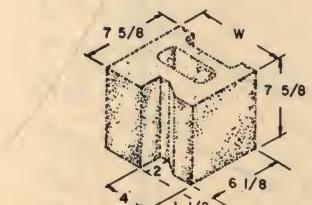
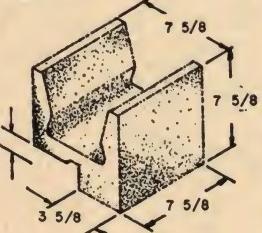


## sash block

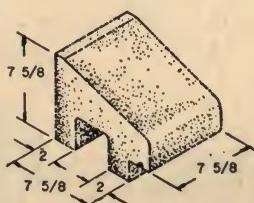
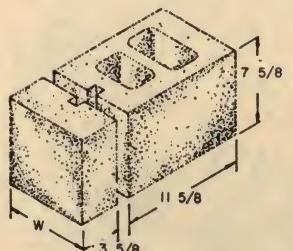
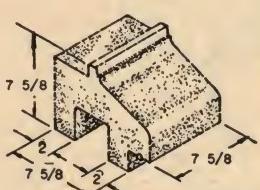
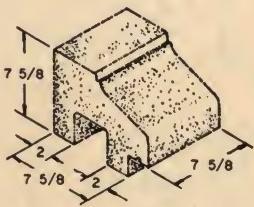
See pages 24 and 25.



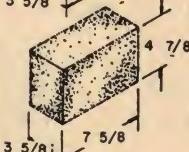
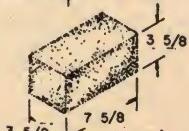
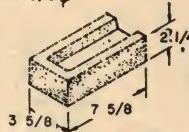
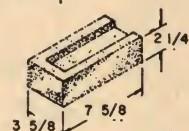
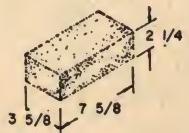
lintels



sills

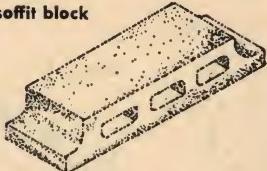


## brick

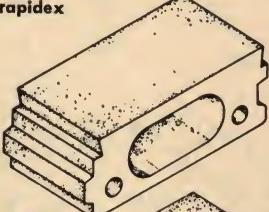


## floor filler block

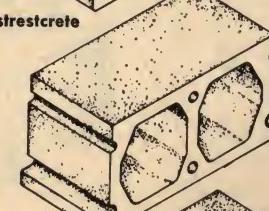
### soffit block



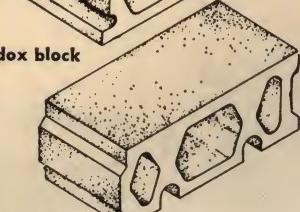
### rapidex



### strestcrete

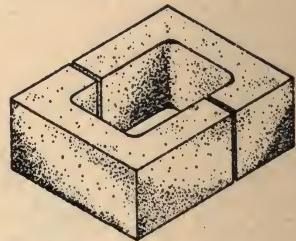


### dox block



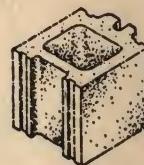
See page 21.

## chimney



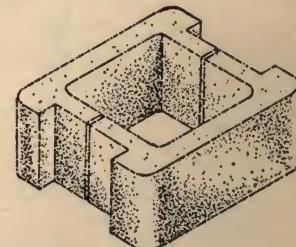
Sizes for all standard clay flue liners See page 17

## control joint



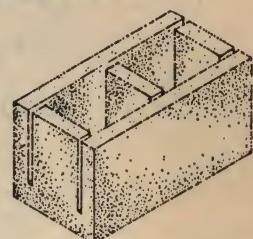
Available for all standard wall widths See page 20

## pilaster



Made in four different shapes See pages 18 and 19

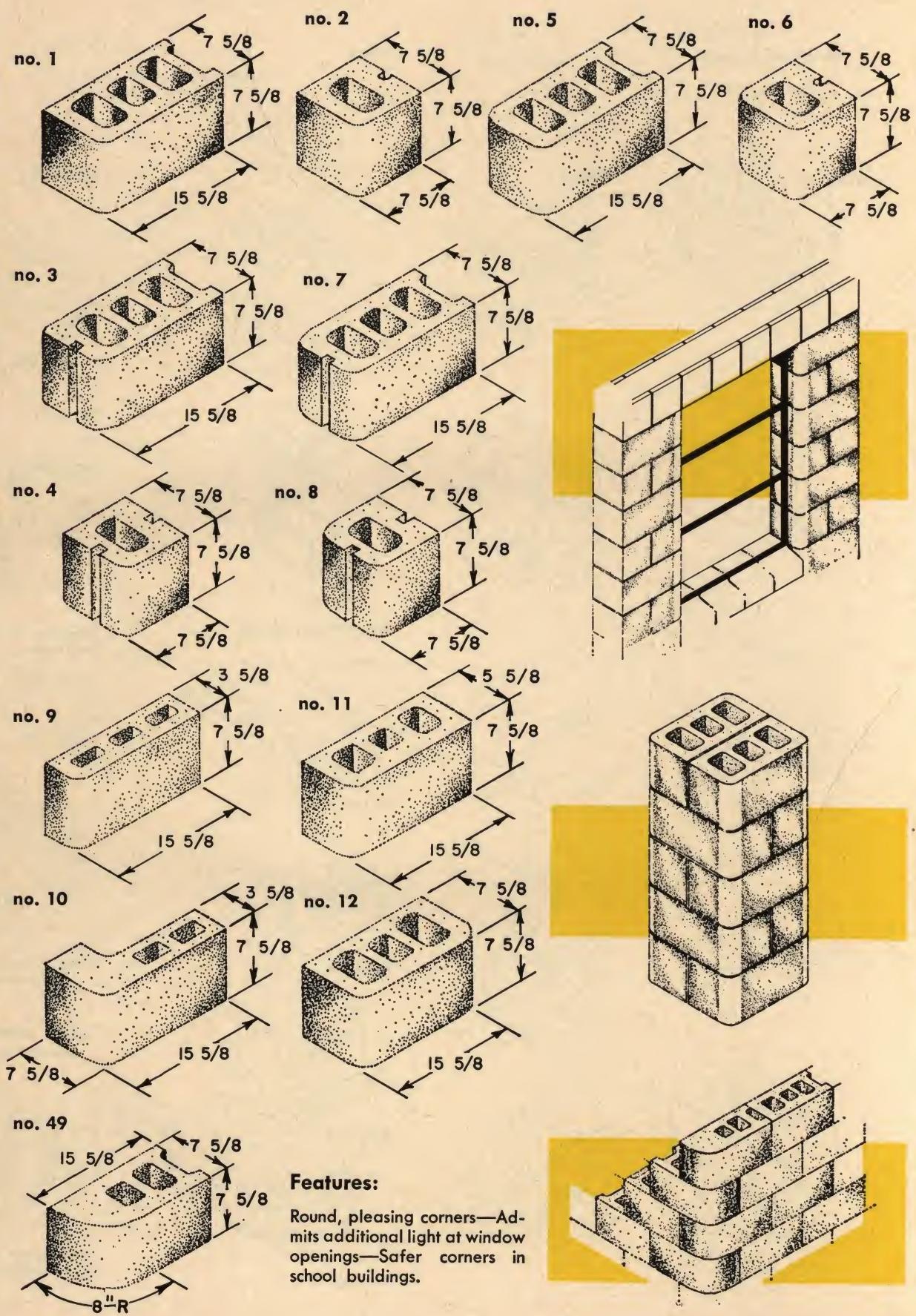
## bond beam



Available in two styles in all wall widths . . .

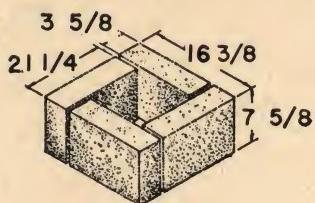
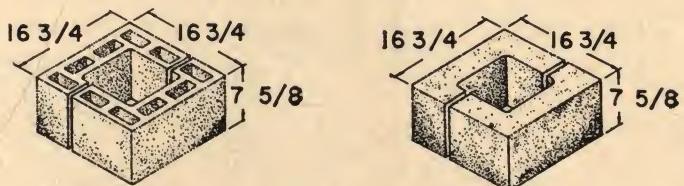
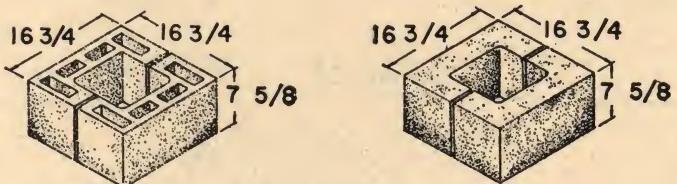
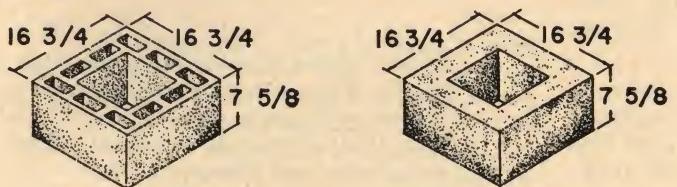
See page 23

**bull nose block** 1" and 2" radius

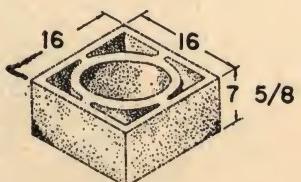


**chimney block** Sizes for all standard clay flue liners

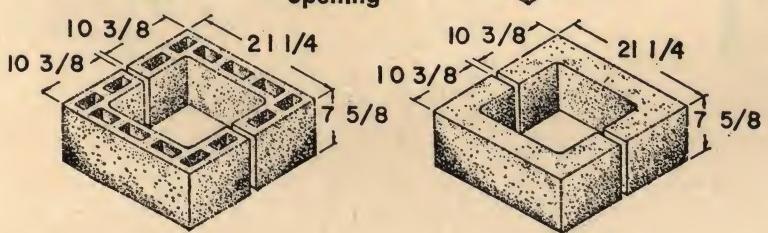
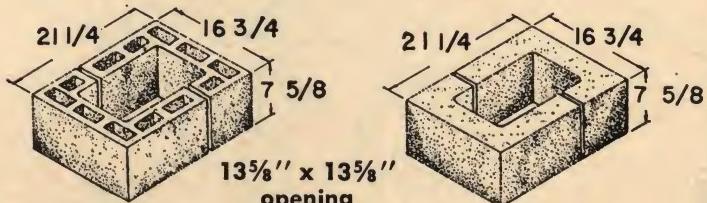
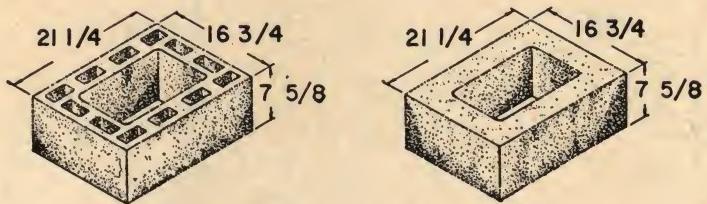
**9 $\frac{1}{8}$ " x 9 $\frac{1}{8}$ " opening**



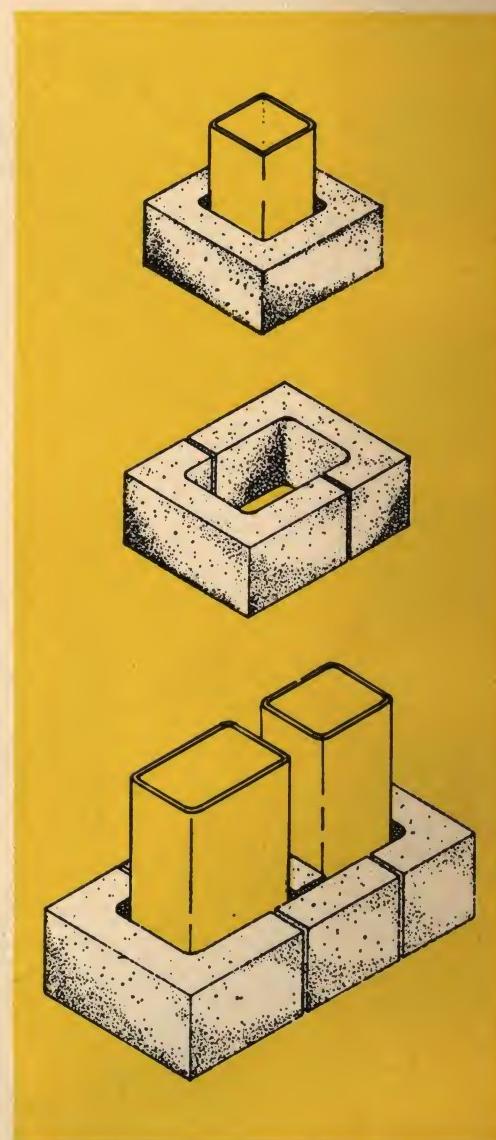
**8 $\frac{1}{2}$ " flue**



**9 $\frac{1}{8}$ " x 13 $\frac{5}{8}$ " opening**



Used to construct economical and sturdy chimneys for all types of buildings. Ideal for piers. Interesting building elements can be created by placing Chimney Block on edge.



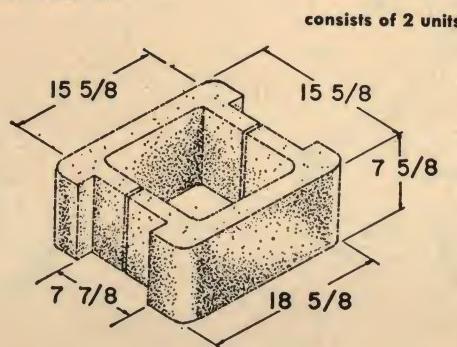
## pilaster block

Unit stabilizes load bearing walls, provides ideal control joints, perfect pilaster, roof truss or I-Beam support. Size of opening 12 in. sq. for reinforced concrete.

Block made in halves for easier and more convenient handling and for ease of building pilaster around reinforcing rods placed first for accurate spacing. Full block also available.

Style 33—same as above with  $9\frac{1}{8}$ " sq. opening.

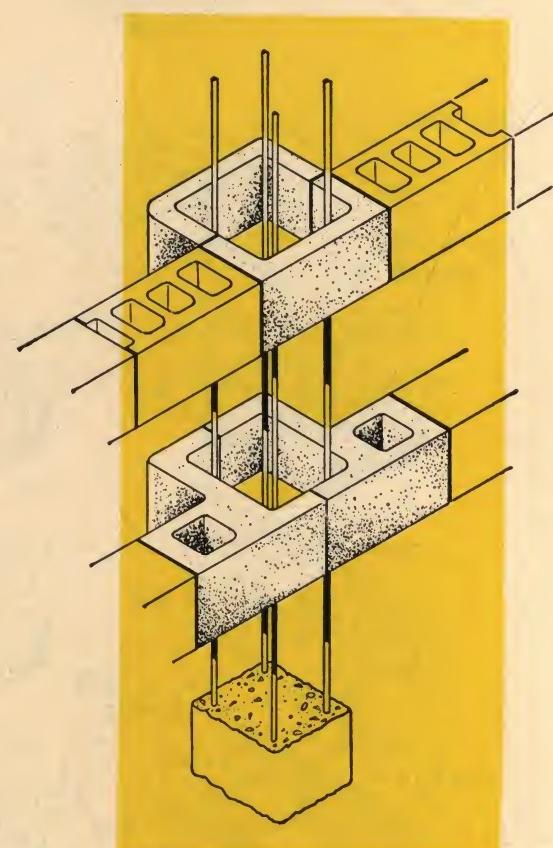
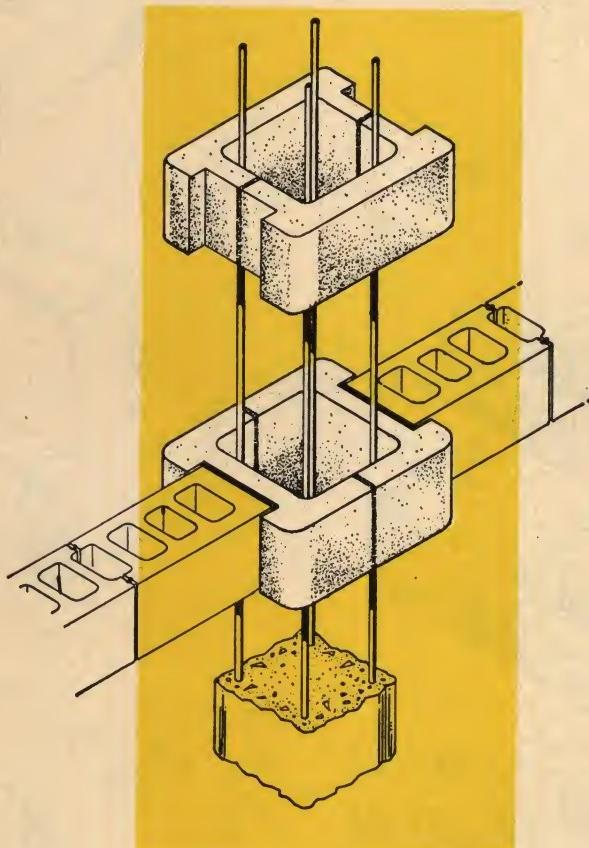
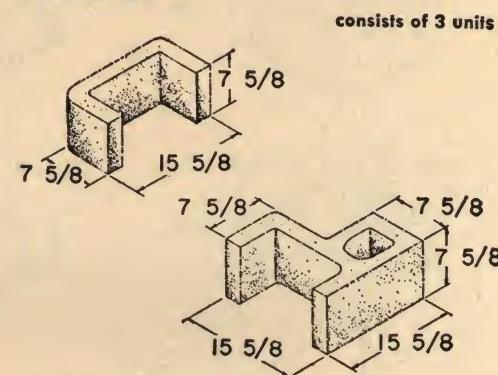
### Set No. 80



15 $\frac{5}{8}$ " square Pilaster Block provides 8" bond and makes a rigid wall. Used for walls below grade where contraction is at a minimum. Used extensively in regions subject to earthquakes and hurricanes.

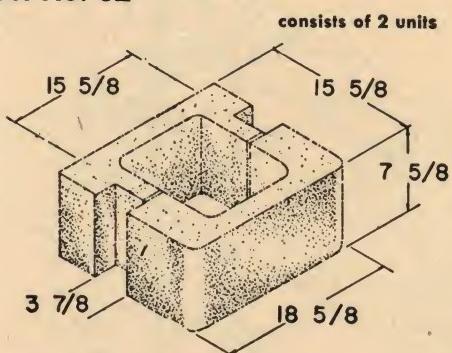
Third unit—with square corners

### Set No. 81



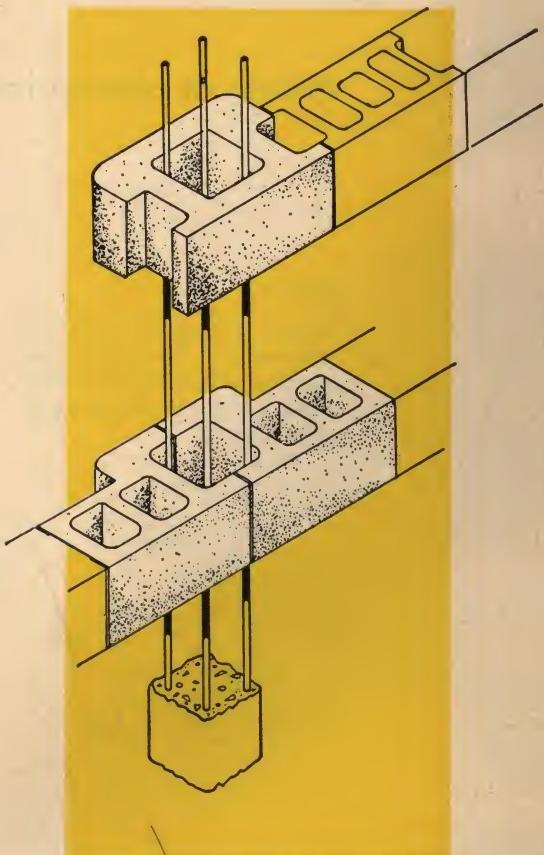
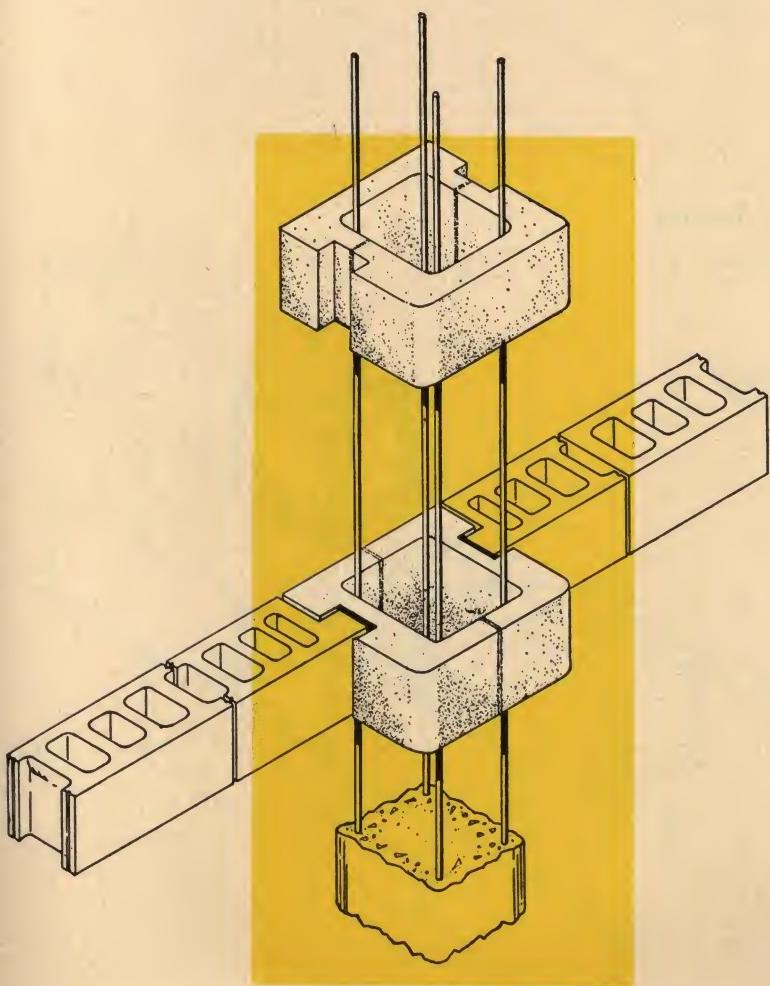
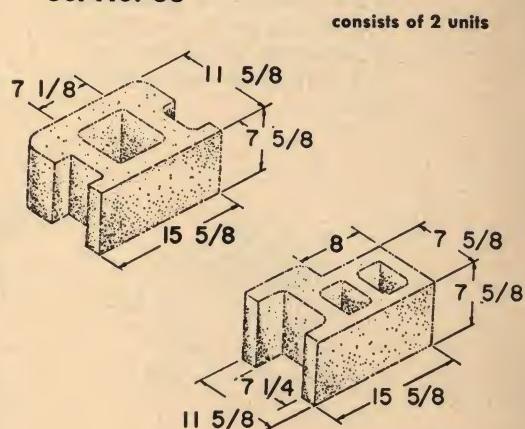
A Pilaster and Control Joint Block. A good wall stabilizer used either with or without reinforced concrete in core. Offset on one side. New sash jamb block Style 52 (See page 24) used to key wall to this pilaster. Vertical mastic filled seam allows for contraction. Modular dimension of wall maintained.

### Set No. 82



Size of units are  $11\frac{5}{8}$ " by  $15\frac{5}{8}$ ". Pilaster Block allowing 8" bond. These units provide economical stabilizer for  $7\frac{5}{8}$ " wall. As shown in the exploded view below, pilaster projects 4" on one side of the wall.

### Set No. 83

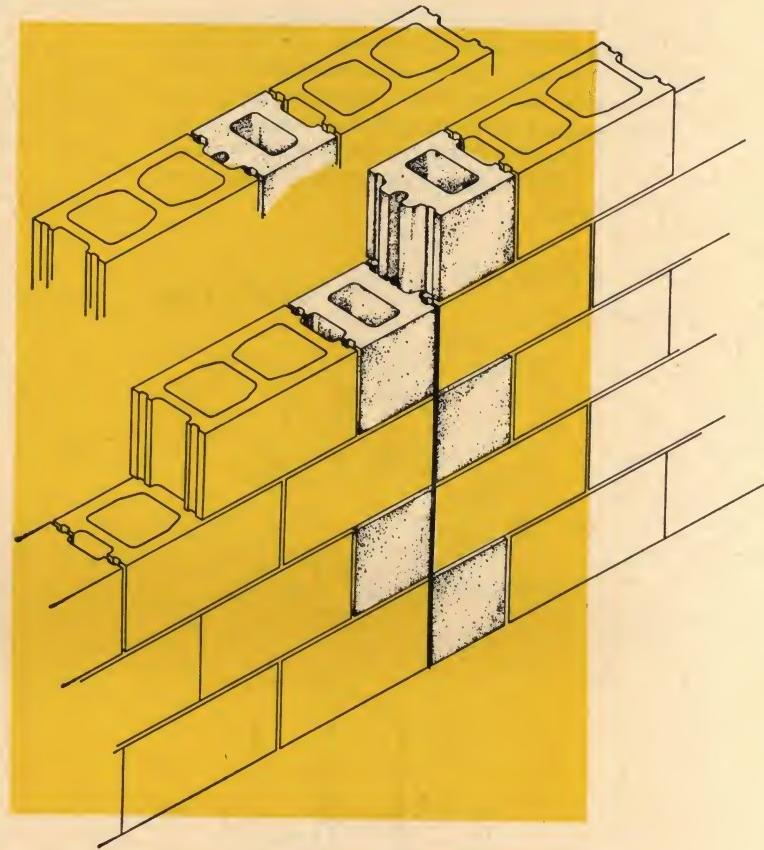
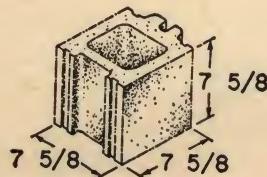


## control joint block

Available for all standard wall widths

### Style 88

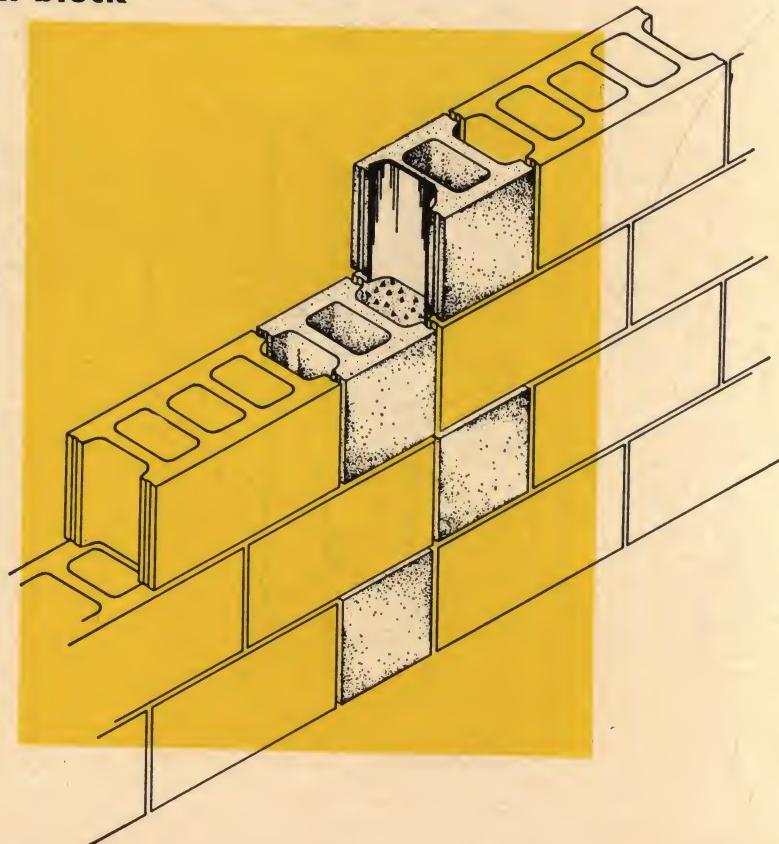
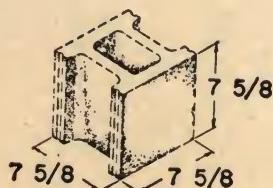
A unit designed to control the volume change of a wall. This block placed at specific intervals will relieve stresses in the wall.



### Michigan control joint block

### Style 89

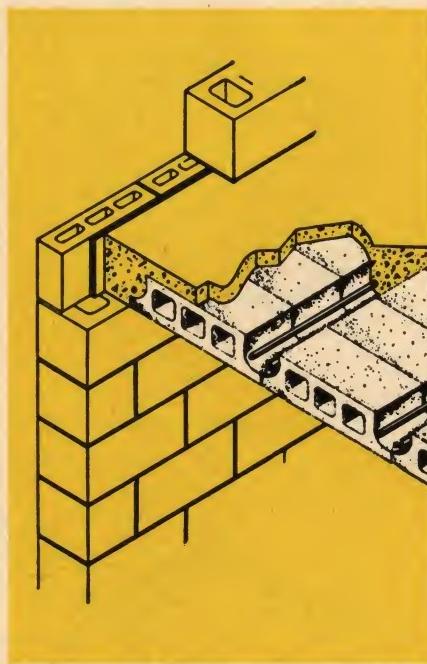
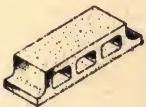
Tongue and groove effect is obtained by filling end core opening with grout. Felt strip is placed on one side to eliminate bonding.



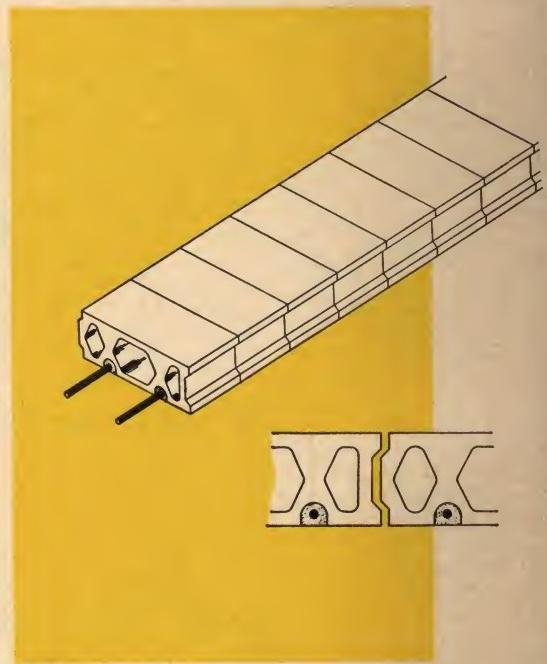
## floor filler & concrete block plank

Besser Company furnishes equipment for making many types of floor filler block for concrete joist floors. This also includes block used for making factory assembled steel reinforced plank for roof, floor and wall construction. The result is fire-safe, permanent and practical construction.

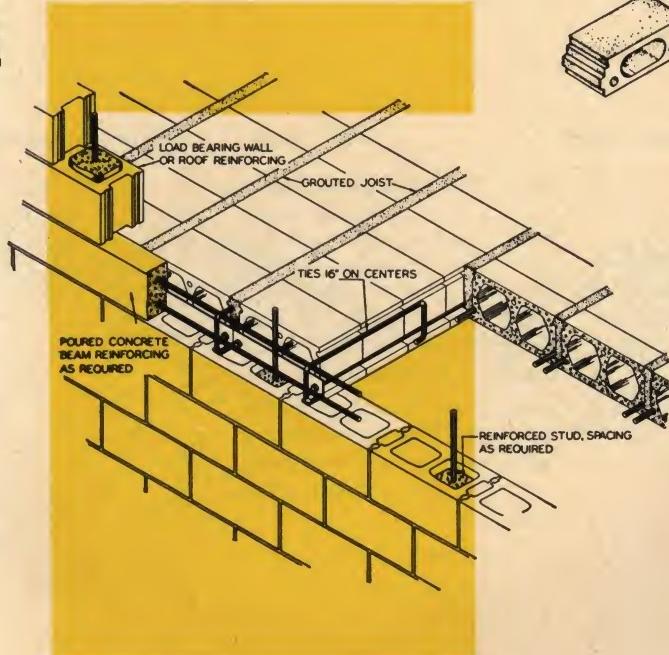
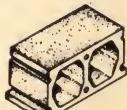
**soffit block**



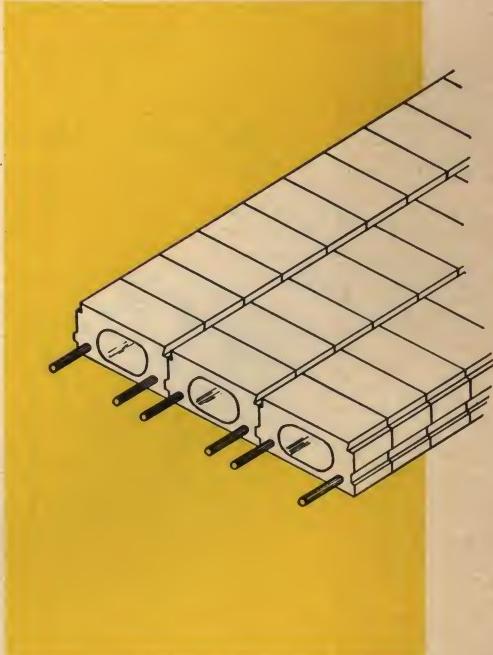
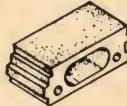
**dox block**



**strestcrete**

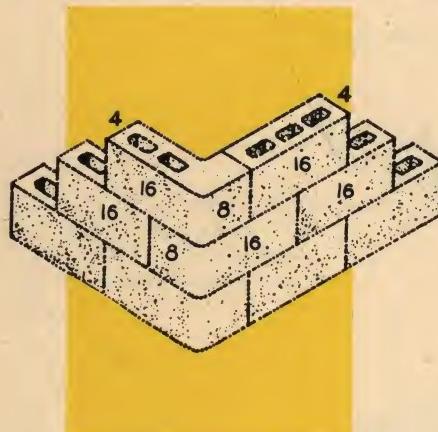


**rapidex**

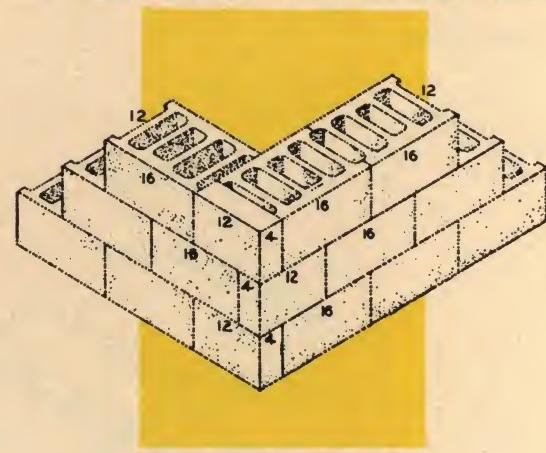


## corner construction

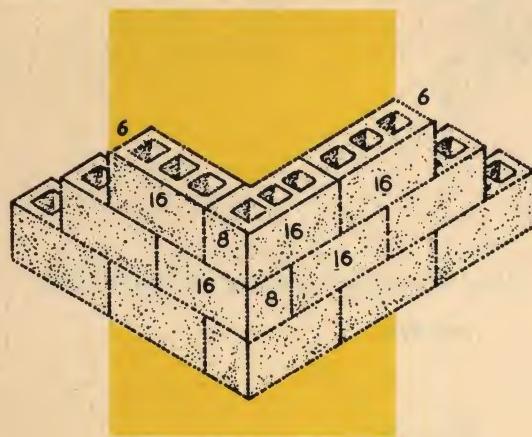
**3 $\frac{5}{8}$ " wall . . . using 3 $\frac{5}{8}$ " L-corner "Bull Nose"**



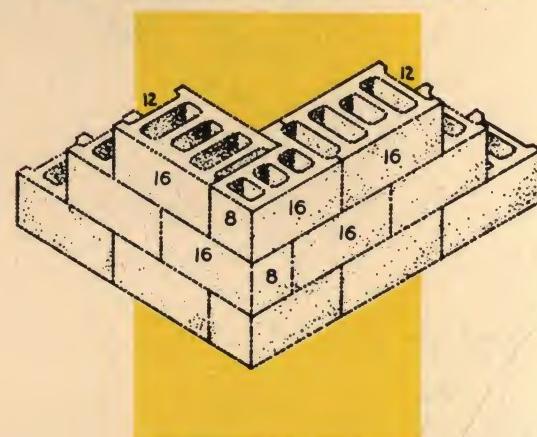
**11 $\frac{5}{8}$ " wall . . . using 3 $\frac{5}{8}$ " x 7 $\frac{5}{8}$ " x 11 $\frac{5}{8}$ " solid slab**



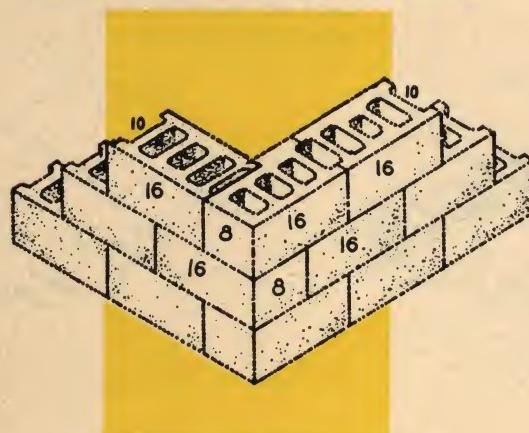
**5 $\frac{5}{8}$ " wall . . . using 5 $\frac{5}{8}$ " L-corner block**



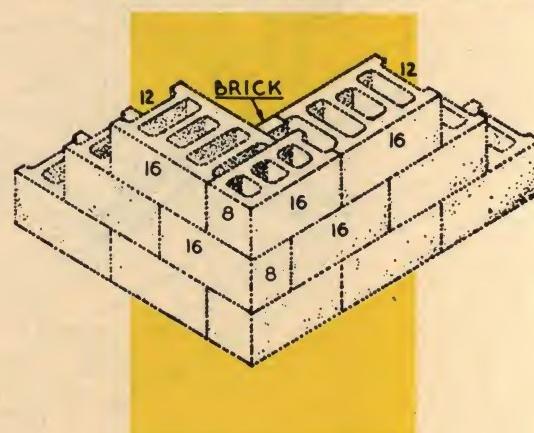
**11 $\frac{5}{8}$ " wall . . . using 11 $\frac{5}{8}$ " L-corner block**

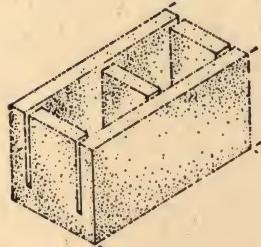
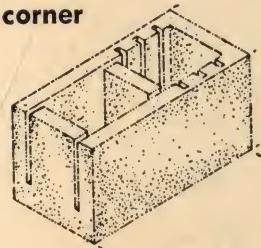


**9 $\frac{5}{8}$ " wall . . . using 9 $\frac{5}{8}$ " L-corner block**

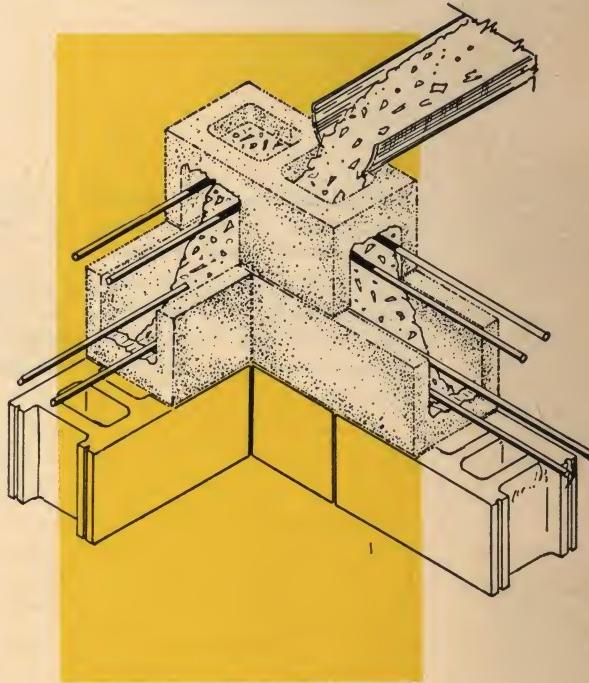


**11 $\frac{5}{8}$ " wall . . . using one 8" block and one brick**

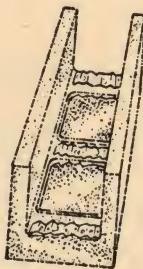
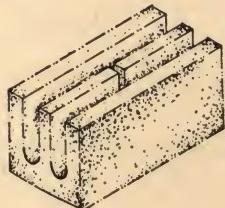
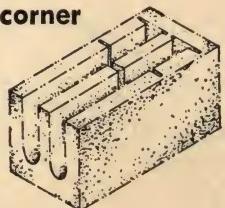


**bond beam block****no. 70 stretcher****corner**

Standard size block so designed it permits construction of 8" or 16" deep continuous reinforced concrete bond around entire building. Vertical reinforced concrete column can be united with horizontal bond section to attain high strength masonry walls.

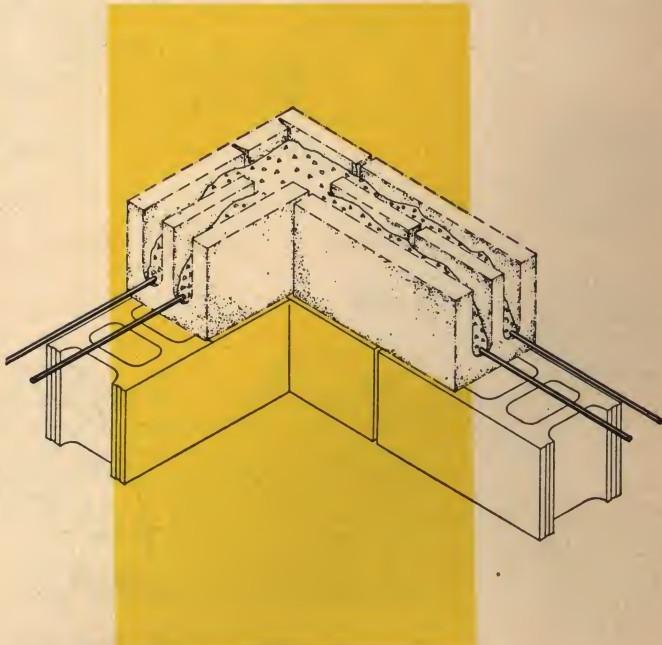


Deep Slots permit ties to be easily knocked out. Sections used to form closure for core openings.

**no. 71 stretcher****corner**

A closed bottom Bond Beam Block, center upright can be left in or knocked out. Bond courses restrain wall from cracking due to volume change. Bond courses should be placed below windows and also the uppermost course.

Also used as a beam to carry load and span an opening. Therefore the name—Bond Beam Block.

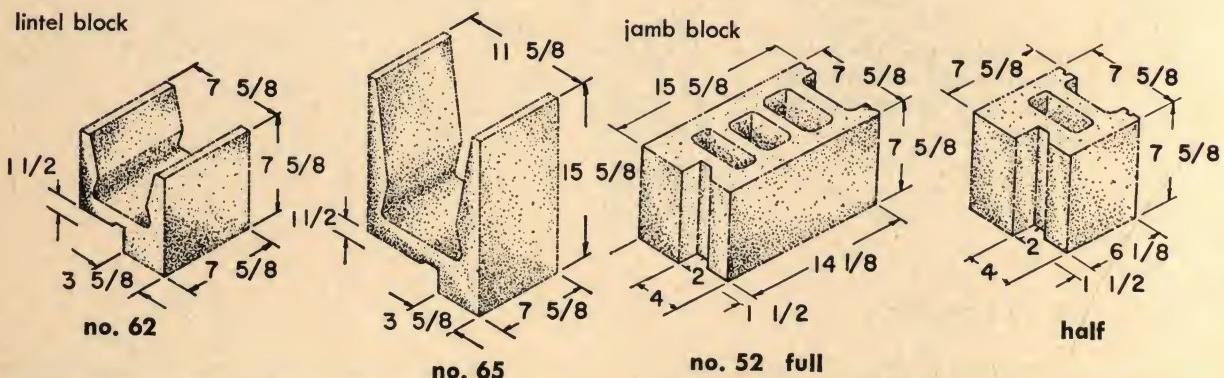
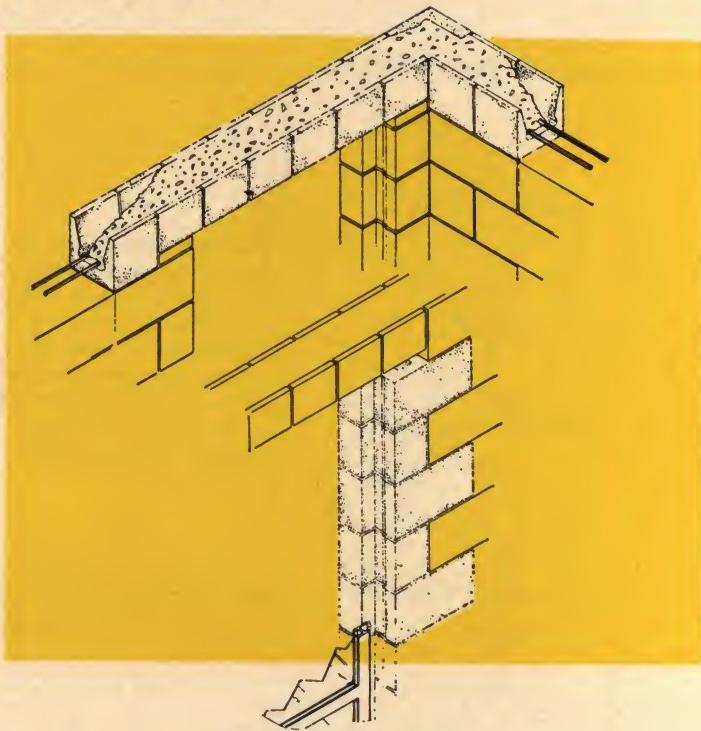


## wall openings

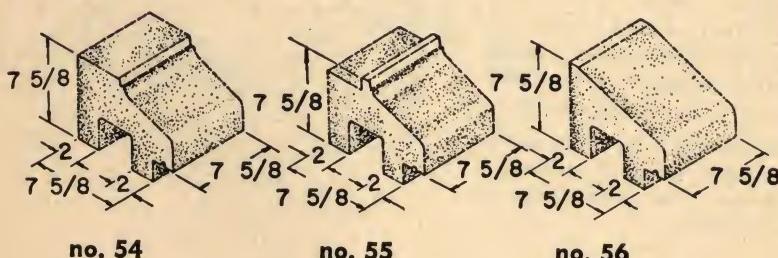
for metal or wood sash installed after wall is erected.

These Masonry Units designed to permit installation of either metal or wood windows, after wall is built.

The Lintel, Jamb and Sill units of this advanced design are approved by many metal and wood window manufacturers. These units make an efficient and weather tight job.



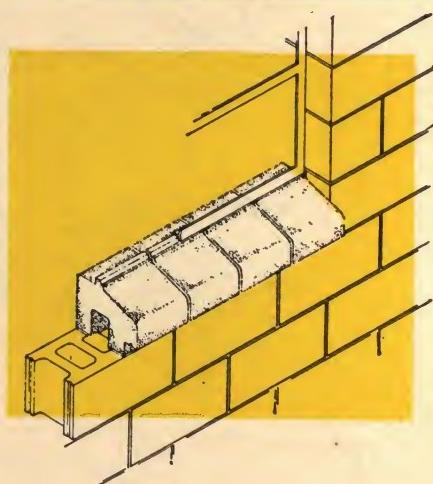
### for sills



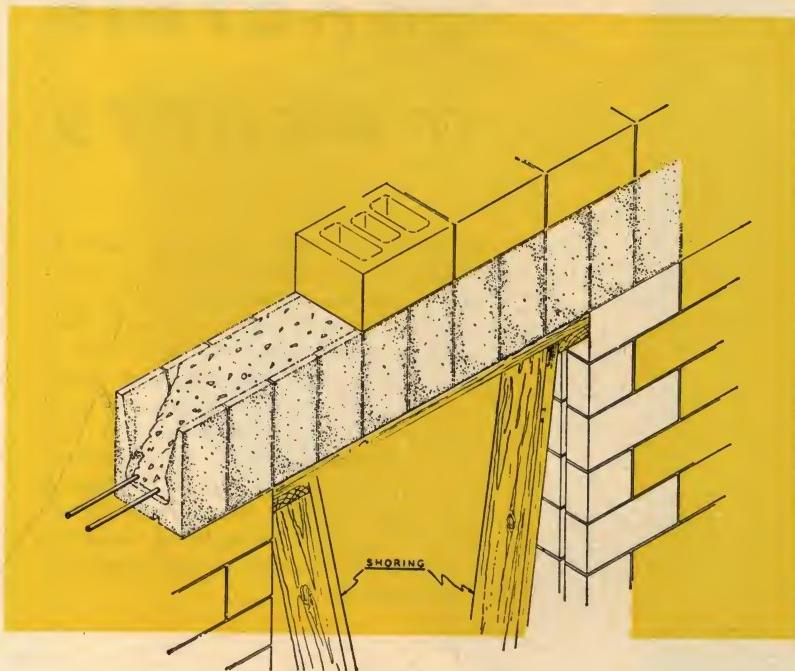
An ideal window sill block for use with metal windows. Style 54 and 55 also furnished  $6\frac{5}{8}$ " high.

This unit is designed for use with standard wood windows.

Similar to Style 54 except for cutout to provide for stone, glass or wood stool.

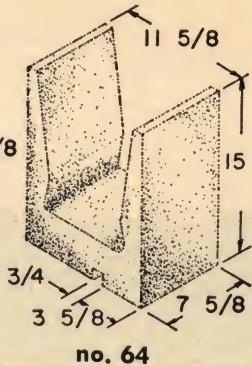
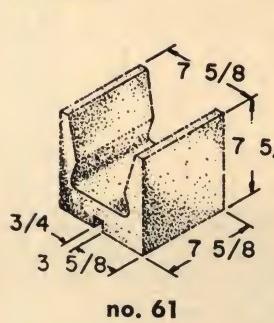


**for metal sash installed as wall is erected**

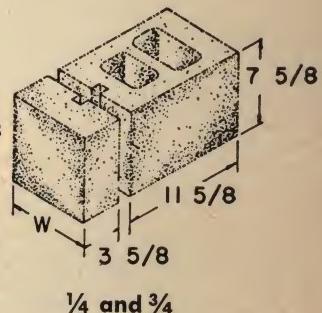
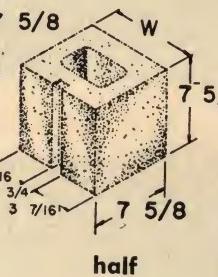
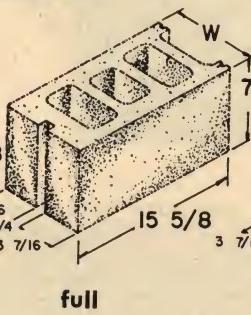


These units are designed for openings with metal sash only. With these units, the windows must be installed as the wall is erected in order to set into the groove provided. The shapes shown below are made in all standard wall widths.

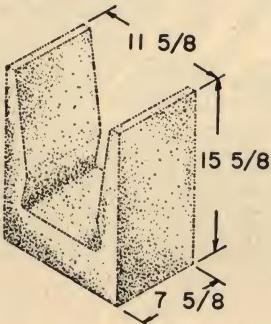
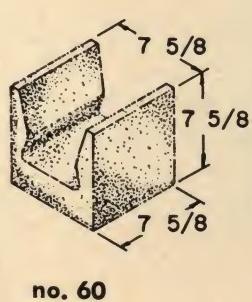
lintel block



jamb block



**for finished masonry openings**



In wall openings where no windows or doors occur, these units may be used to produce finished masonry openings wherever required. Unit No. 63 is provided to accommodate longer span openings.

These units are employed to form continuous lintel and beam at lintel course around the entire perimeter of exterior walls to avoid possibility of cracking due to drying shrinkage and temperature changes.

Units are made in all standard wall widths.

# BESSER



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